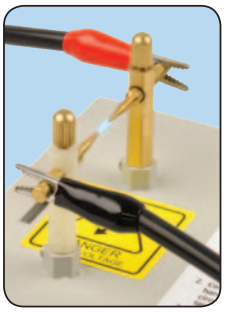
PLUS+QUIP

Off-Car Ignition Coil Tester Instruction Manual

EQP-112 Off-Car Ignition Coil Tester

The EQP-112 Ignition Tester is a portable tool for testing a variety of ignition coils off the vehicle to determine if the output spark is acceptable.

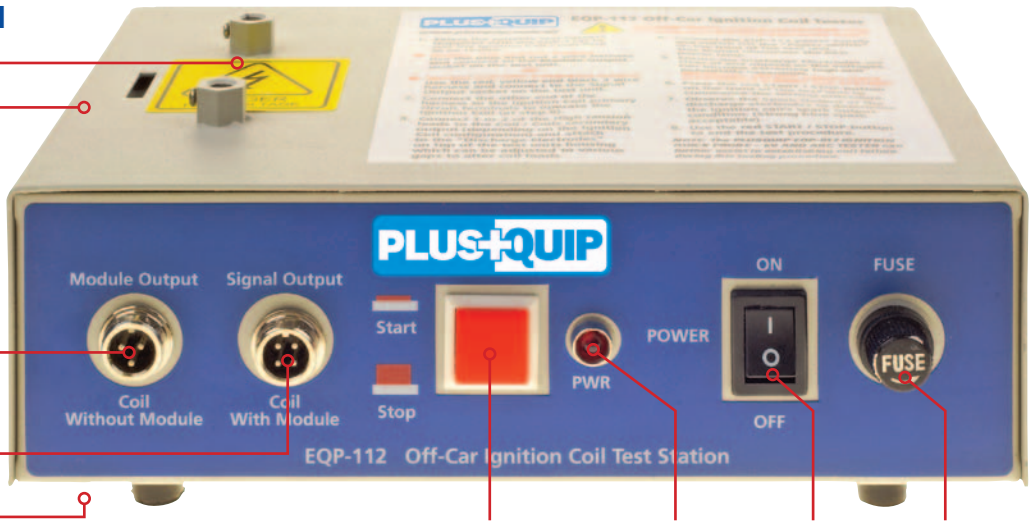
Function Descriptions:



- Can output two sets of drive signals at the same time;
- Has anti-interference ability, good stability, high load capacity;
- Small, easy to use;
- Output signal divided into **"direct signal"** and **"within module"** signal allows ignition coil **with** integrated module and **without** module to be tested;
- Discharging electrode spark gaps are easily adjustable.

Ignition Coil Tester Control Panel

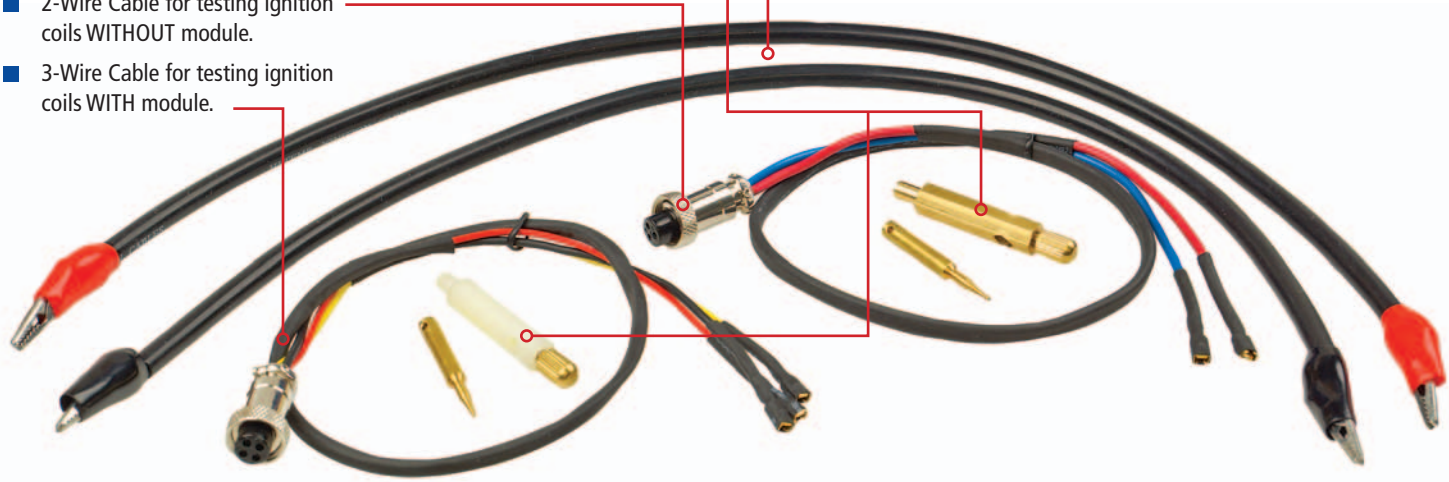
- Discharging Electrode Location.
- Metal Case.
- Direct Output Signal (to test ignition coils without modules).
- Integrated Module Output Signal (to test ignition coils with module).



- Start / Stop Button for starting and ending test.
- Power Light.
- Power Switch.
- Power Fuse.

Packing list of included components:

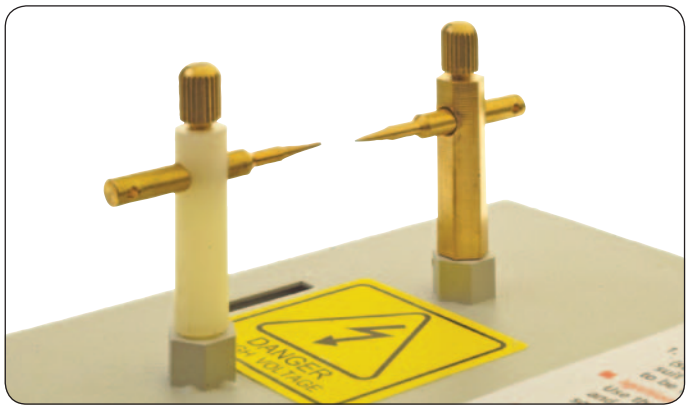
- Ignition Coil Tester.
- High-Voltage Leads (Red x 1, Black x 1).
- Discharge Electrodes (Metal x 1, Plastic x 1).
- 2-Wire Cable for testing ignition coils WITHOUT module.
- 3-Wire Cable for testing ignition coils WITH module.



Assembly and Test Procedure:

A. **Place the discharge electrodes in the holes provided at the top of the tester case as shown.**

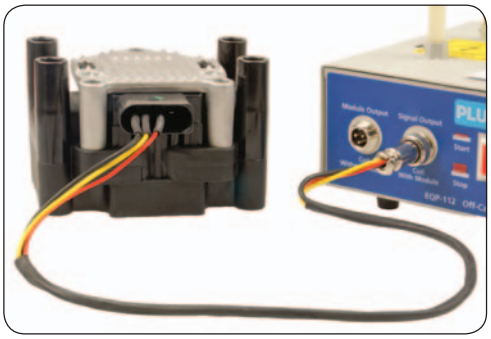
B. **Adjust the electrode gap to approximately 1cm.**



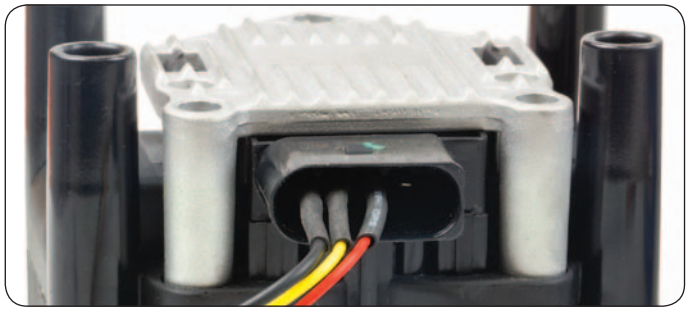
C. **Select the cable required according to ignition coil type (with or without module).**

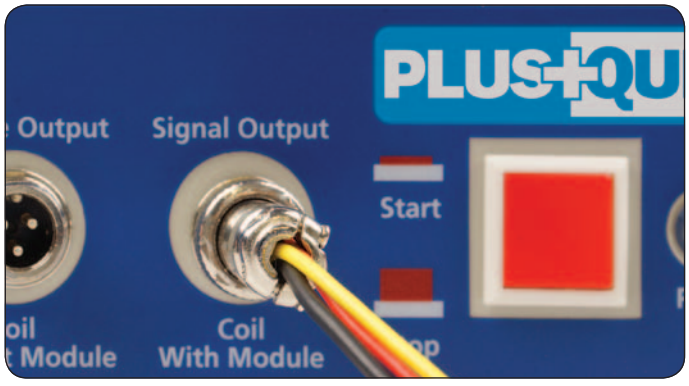
D. **Connect 3-Wire harness cable to the combined module & ignition coil.**

NOTE:
Ignition coil pin configurations vary on different coils. Please CHECK for correct pin configuration on ignition coil to be tested before connecting the harness.



This typical waste spark ignition coil pack requires two outputs (one ignition coil) to be tested at a time. The other two outputs must be tested separately.

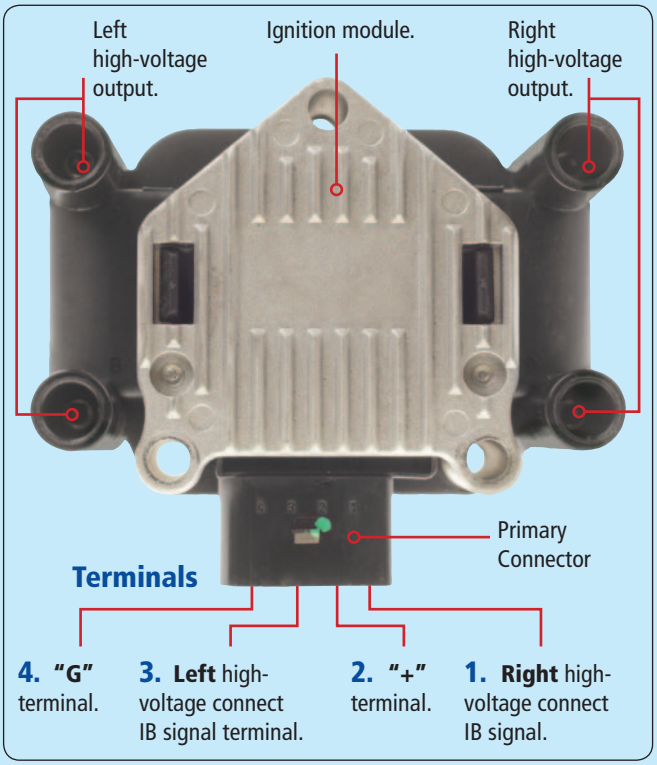


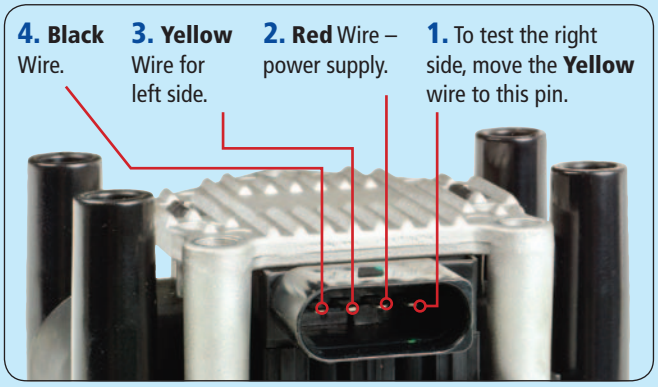


[continued]

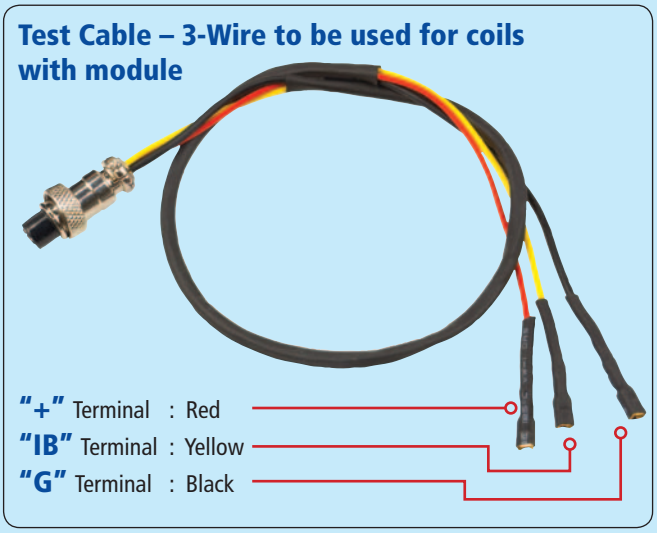
Example : VW Ignition Coil

For example, to test this VW ignition coil and module assembly (032905106B) which has two sets of high-voltage outputs, one primary input connector and an ignition module. The 3-Wire harness cable should be used to test this type of assembly.





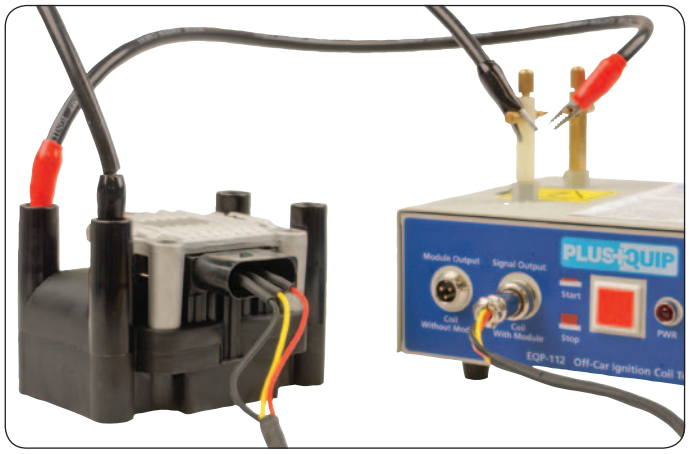
Test Cable – 3-Wire to be used for coils with module

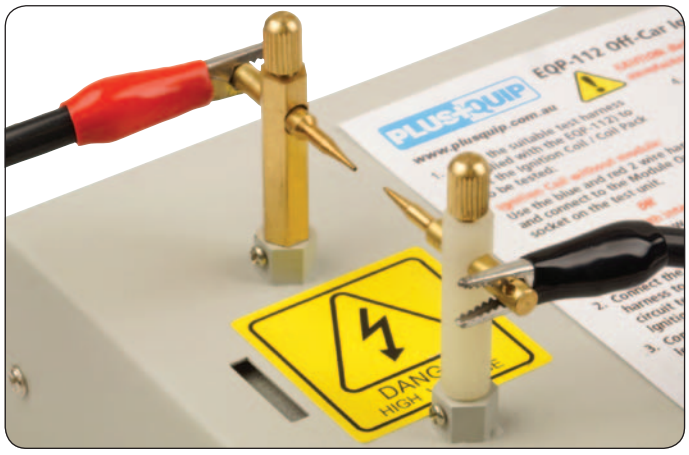


Assembly and Test Procedure *(continued)* :

E. Connect high-voltage leads.

NOTE : Testing One Coil (two high-voltage outlets as shown)





F. Connect test unit to a 12 Volt power source.

WARNING: High-voltage at the discharge electrodes may be harmful. Do not touch the discharge electrodes during test.

G. Switch the power switch to the "ON" position.

- The "PWR" light should illuminate. (Check connections and power supply if light does not illuminate).

[continued]

H. Ensure all connections are correct and press the "Start" button.

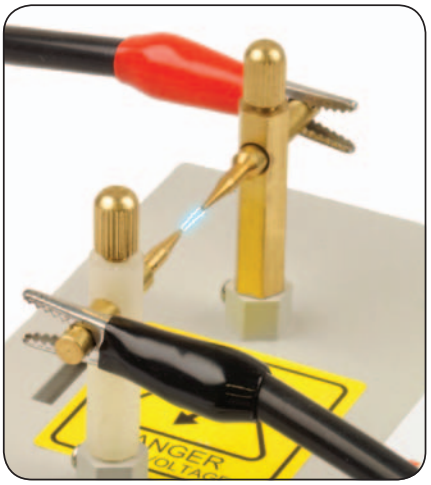
WARNING: High-Voltage at the discharge electrodes may be harmful. Do not touch the discharge electrodes during test.

I. Observe discharge electrodes.

- The condition of the spark generally indicates the condition of the ignition coil. i.e. :

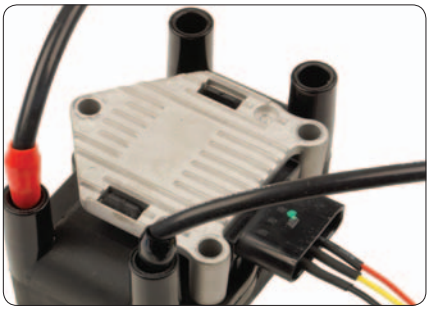
A strong blue spark is an indication of a healthy ignition coil.

A weak orange spark is generally the result of a weak or faulty ignition coil.



J. On completion of the spark output test press the START / STOP button to end the test.

K. Remove and reconnect the high-voltage leads to the other suitable ignition coil outlets to complete the ignition coil test.



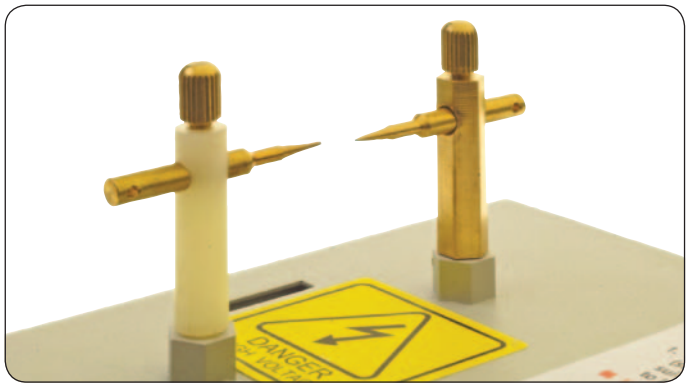
L. The 3 pin wire harness will also need to be altered at the ignition coil to suit the other half of the coil pack (other two high-voltage outlets) to be tested.

M. Repeat steps from G to J to monitor the output spark to determine if the ignition coil is acceptable. ■

Testing a typical Coil over plug (COP) WITH integrated module:

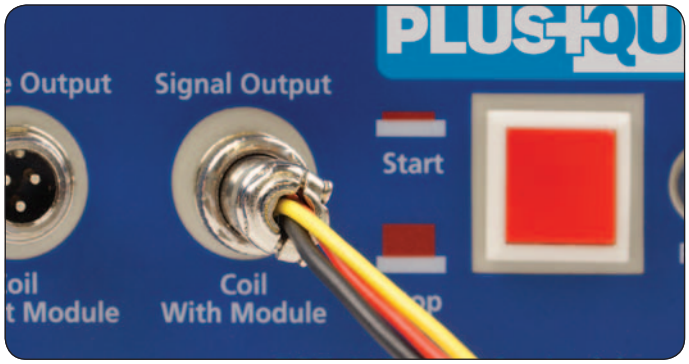
A. **Place the discharge electrodes in the holes provided at the top of the tester case as shown.**

B. **Adjust the electrode gap to approximately 1cm.**



C. **Select the harness cable to suit the ignition coil to be tested.** For example the Toyota Coil (90919-02230) [at right] has an integrated ignition module. The 3-Wire harness must be used.

D. **Connect the 3-Wire harness to the "SIGNAL OUTPUT" socket on the test unit.**



E. **Connect the 3-Wire harness to the ignition coil to be tested. Ensure correct configuration.**

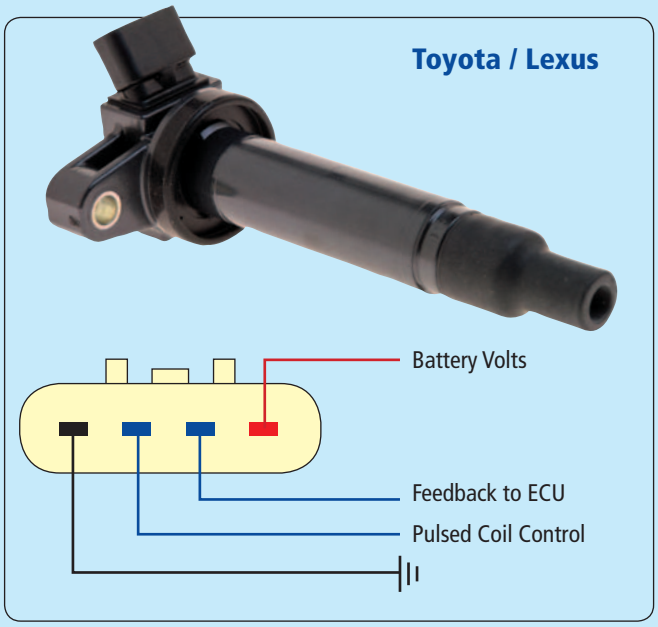
F. **Connect one end of the high-voltage lead to the secondary output of the ignition coil.**

Ensure the high-voltage lead contacts the spring or contact.

[continued]

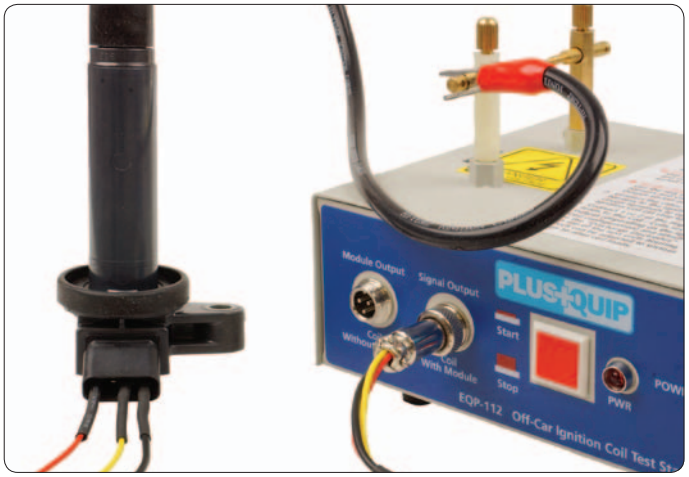
Example : Toyota Coil

Toyota Coil (90919-02230), this item has an ignition module. The 3-Wire harness must be used.



G. **Connect the other end of the high-voltage lead to the brass connector of the plastic discharge electrode.**

NOTE: Only one high-voltage lead is required for this test (one output per coil).



H. **Recheck all connections.**

I. **Connect test unit to a 12 Volt power source.**

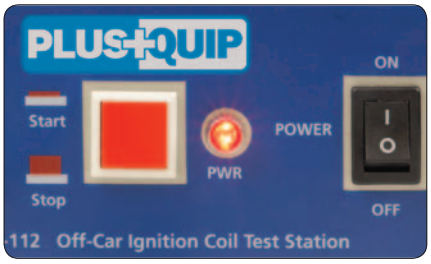
WARNING: High-voltage at the discharge electrodes may be harmful. Do not touch the discharge electrodes during test.

[continued]

Testing a typical Coil over plug (COP) WITH integrated module *(continued)*:

J. Switch the power switch to the "ON" position.

- The "PWR" light should illuminate. (Check connections and power supply if light does not illuminate).



K. Ensure all connections are correct and press the "Start" button.

WARNING: High-Voltage at the discharge electrodes may be harmful. Do not touch the discharge electrodes during test.

L. Observe discharge electrodes.

- The condition of the spark generally indicates the condition of the ignition coil. i.e. :

A strong blue spark is an indication of a healthy ignition coil.

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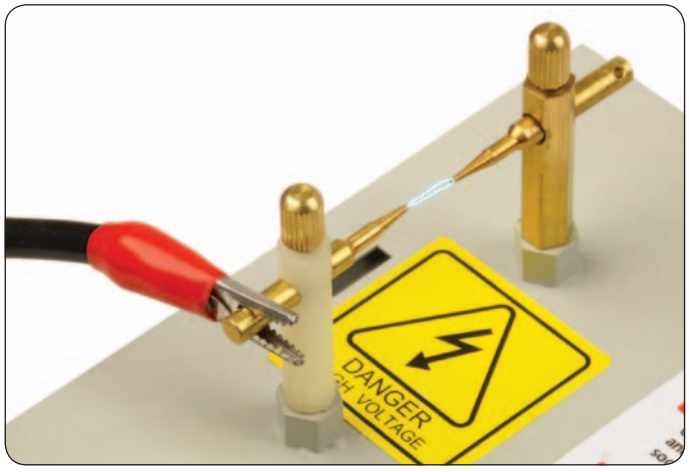
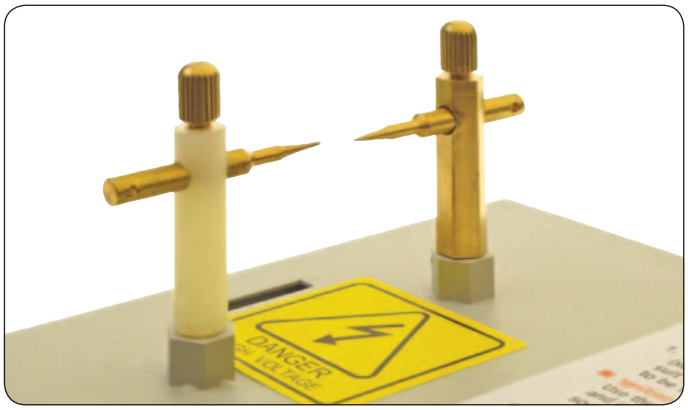


M. On completion of the spark output test press the START / STOP button to end the test.

Testing a typical Coil over plug (COP) WITHOUT integrated module:

A. Place the discharge electrodes in the holes provided at the top of the tester case as shown.

B. Adjust the electrode gap to approximately 1cm.



C. Select the harness cable to suit the ignition coil to be tested. For example IGC-163 Ford Falcon ignition coil has no internal module.

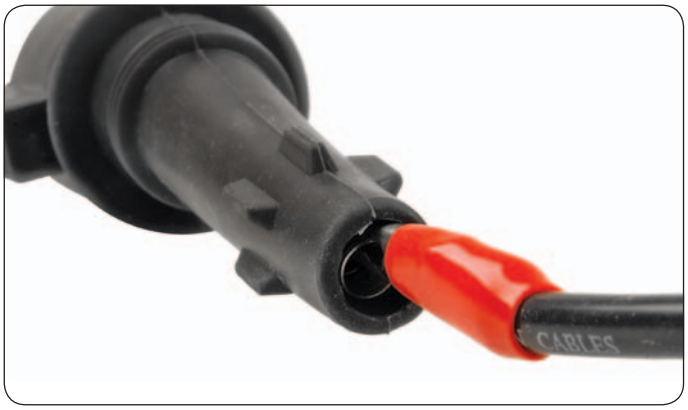
D. The 2-Wire harness must be used and connected to the "MODULE OUTPUT" socket on the test unit.

E. The other end of the harness must be connected to the two terminals of the ignition coil.

[continued]

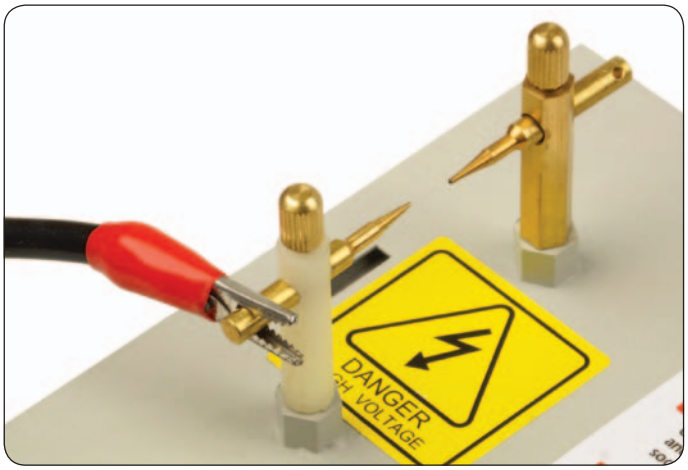
Testing a typical Coil over plug (COP) WITHOUT integrated module *(continued)*:

F. **Select one end of the high-voltage lead to the secondary output of the ignition coil. Ensure the high-voltage lead contacts the spring or internal contact.**



G. **Connect the other end of the high-voltage lead to the plastic discharge electrode.**

NOTE: Only one high-voltage lead is required for this test as there is only one secondary output.



H. **Recheck all connections.**

I. **Connect test unit to a 12 Volt power source.**

WARNING: High-voltage at the discharge electrodes may be harmful. Do not touch the discharge electrodes during test.

J. **Switch the power switch to the "ON" position.**

- The "PWR" light should illuminate. (Check connections and power supply if light does not illuminate).

K. **Ensure all connections are correct and press the "Start" button.**

WARNING: High-Voltage at the discharge electrodes may be harmful. Do not touch the discharge electrodes during test.

L. **Observe discharge electrodes.**

- The condition of the spark generally indicates the condition of the ignition coil. i.e. :

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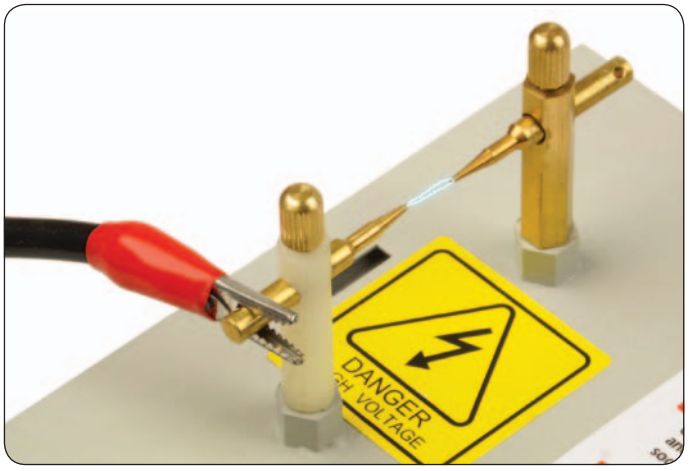

M. **On completion of the spark output test press the START / STOP button to end the test.**

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